Patient characteristics and treatment pathways in patients with asthma or asthma-COPD overlap treated with Medium-Strength ICS/LABA and switching to High-StrEngth ICS/LABA or Medium-Strength TRImbow (BETRI)

First published: 13/06/2024

Last updated: 02/04/2025

Study Ongoing

Administrative details

EU PAS number

EUPAS1000000205

Study ID

1000000205

DARWIN EU® study

No

Study countries

United Kingdom

Study description

Effects of switching to triple therapy versus escalation of dual therapy regimen in patients with asthma or asthma-COPD overlap treated with medium-strength dual therapy.

Study status

Ongoing

Research institutions and networks

Institutions

Observational & Pragmatic Research Institute Pte (OPRI)

United Kingdom

First published: 06/10/2015

Last updated: 19/08/2024

Institution | Educational Institution | Laboratory/Research/Testing facility | ENCePP partner

Contact details

Study institution contact

David Price dprice@opri.sg

Study contact

dprice@opri.sg

Primary lead investigator

David Price 0000-0002-9728-9992

Primary lead investigator

ORCID number:

0000-0002-9728-9992

Study timelines

Date when funding contract was signed

Planned: 21/02/2024

Actual: 21/02/2024

Study start date

Planned: 06/06/2024

Actual: 06/06/2024

Data analysis start date

Planned: 29/07/2024

Date of final study report

Planned: 18/04/2025

Sources of funding

- Pharmaceutical company and other private sector

More details on funding

Chiesi Farmaceutici S.p.A.

Regulatory

Was the study required by a regulatory body?

No

Is the study required by a Risk Management Plan (RMP)?

Not applicable

Methodological aspects

Study type

Study type list

Study topic:

Disease /health condition

Human medicinal product

Study type:

Non-interventional study

Scope of the study:

Effectiveness study (incl. comparative)

Data collection methods:

Primary data collection

Study design:

This is a retrospective cohort study with a new-user, active-comparator design.

Main study objective:

Objective 1: To identify predictors of clinical success in step-up therapy from medium dose inhaled corticosteroid / long-acting beta-agonist (ICS/LABA) to medium dose Trimbow.

Objective 2: To evaluate whether stepping up from medium dose ICS/LABA to medium dose Trimbow is not inferior to stepping up to high dose ICS/LABA in terms of annualized rate of exacerbations and asthma control in real-world clinical practice. Superiority to be examined if non-inferiority achieved.

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Medicinal product name

TRIMBOW

Medicinal product name, other

High-dose inhaled corticosteroid / long-acting beta-agonist combinations

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Study drug International non-proprietary name (INN) or common name

BECLOMETASONE

FORMOTEROL

GLYCOPYRRONIUM BROMIDE

Anatomical Therapeutic Chemical (ATC) code

(R03AL09) formoterol, glycopyrronium bromide and beclometasone

formoterol, glycopyrronium bromide and beclometasone

Medical condition to be studied

Asthma

Asthma-chronic obstructive pulmonary disease overlap syndrome

Population studied

Short description of the study population

This study will include all patients in the Optimum Patient Care Research Database that fulfil all the inclusion criteria and none of the exclusion criteria below.

Inclusion criteria:

• Prescription of medium-dose Trimbow or high-dose ICS/LABA in OPCRD on or after 1 Jan 2017

• Recorded with asthma prior to index date

• Patients with at least one year of prescription of medium dose ICS/LABA therapy in the year prior to index date

• Aged 18 years old or older at index date

• With at least one year of available data prior to index date

Exclusion criteria:

• Diagnosis of other chronic respiratory conditions, including interstitial pulmonary fibrosis, lung cancer, and bronchiectasis

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Age groups

- **Adult and elderly population (≥18 years)**
  - Adults (18 to < 65 years)
    - Adults (18 to < 46 years)
    - Adults (46 to < 65 years)
  - Elderly (≥ 65 years)
    - Adults (65 to < 75 years)
    - Adults (75 to < 85 years)
    - Adults (85 years and over)

Estimated number of subjects

16914

Study design details

Setting

The index date is the date of study entry, i.e. the date of initiating medium-dose Trimbow or high-dose ICS/LABA, which is on or after 1 Jan 2017.

The study / follow-up period starts from the index date to death or the end of data availability (that is, the date of data extraction), whichever earlier.

The baseline period is the entire period available for each patient prior to the index date and will be of at least one year.

Comparators

The exposures of interest will be the first recorded prescription of medium-dose Trimbow (i.e. the presence of Trimbow 100) or high-dose ICS/LABA (>800mcg/day Beclomethasone dipropionate-equivalent), which are to occur on / after 1 Jan 2017.

Exposures (prescriptions) will be ascertained from prescription records.

Exposures are ascertained from OPCRD using SNOMED-International codes, SNOMED-UK codes, and Read codes v2 and v3.

Outcomes

• Severe exacerbation rate as defined according to the ERS/ATS task force definitions, that is:

o an asthma-related hospital attendance/admission and/or

o an asthma-related accident and emergency (A&E) attendance and/or

o a primary care consultation with an acute OCS course of ≥3 days

• Risk domain asthma control, defined by not having any asthma-related hospitalization, acute oral steroid use, nor lower respiratory tract infection (LRTI)

• Overall asthma control as both an aggregated and disaggregated outcome; controlled asthma is defined by fulfilling all of the following components:

o No asthma-related hospitalization,

o No acute oral steroid use, or LRTI, and

o Average salbutamol-equivalent SABA dosage ≤200 µg/day

• Reliever use, referring to the average daily SABA dosage in the follow-up period

• Mean daily ICS exposure (µg/day; i.e. all prescribed ICS divided by number of follow-up days)

• Mean daily OCS exposure (µg/day; i.e. all prescribed OCS divided by number of follow-up days)

Data analysis plan

For objective 1, multivariable models consisting of pre-specified candidate predictors will be fitted for each outcome to identify predictors of each outcome.

For objective 2, a target trial emulation approach will be used.
All baseline variables will be described by treatment groups (medium-dose Trimbow, vs high-dose ICS/LABA) for all analyzed patients.
To minimize confounding, in particular confounding by indication, propensity score weighting with overlap weights will be used to minimize imbalances in baseline covariates between treatment groups, so that the treatments will be compared at the point of clinical equipoise.
Primary analyses will be performed with the intention-to-treat principle, allowing patients in each treatment group to change their therapy during follow-up without being censored.
Per protocol analyses will also be reported in line with guidelines for non-inferiority studies. Propensity score-weighted generalised linear modelling will be performed to estimate the associations between the clinical outcomes and treatment.

Data management

ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Use of a Common Data Model (CDM)

CDM mapping

No

Data quality specifications

Check conformance

Yes

Check completeness

Yes

Check stability

Yes

Check logical consistency

Yes

Data characterisation

Data characterisation conducted

Yes